
North Coast Regional Water Quality Control Board

July 29, 2014

Dairy Water Quality Inspection Report

Dairy Name: Cunningham Dairy
Physical Address: Ex. 6 Personal Privacy (PP)
Waste Discharger ID 1B89015DSO
Inspection Date: April 15, 2014 at 10:30 A.M.
Inspection Attendance: Cherie Blatt, Regional Water Board
Alice and Jim Cunningham, Dairy Operator
Melissa Lema, Western United Dairymen
Glenn Sakamoto, Environmental Protection Agency (USEPA)
Becky Mitschele, USEPA
Deanne Meyer, U.C. California Extension-Davis
Valerie Minton, Sonoma Resource Conservation District
Christine Kuehn, Sonoma Resource Conservation District
Dairy Type: Conventional
Cow Breed: Holstein and Jerseys
Cow Numbers: 450 Milking and Dry (November 2013)
400 Other (November 2013)
Permitted Maximum Milking + Dry: 550
Permitted Maximum Other Dairy Cattle: 350
Acres Owned: 60 acres
Acres that receive manure and/or process water: 20 acres
Nutrient Management Plan: None
Watersheds: Russian River Watershed

I. Introduction

On April 15, 2014, North Coast Regional Water Quality Control Board (Regional Water Board) staff conducted a routine inspection of Cunningham Dairy. The purpose of this inspection was to review the dairy water quality practices for compliance with the Conditional Waiver of Waste Discharge Requirements for Existing Cow Dairies Order R1-2012-0003 (Waiver). Recommendations listed at the end of this report are offered to protect surface waters, groundwaters, and ensure compliance with the Waiver.

Timeline

April 12, 2012: The dairy submitted a Notice of Intent to enroll in the Waiver.

June 14, 2012: The dairy was enrolled under the Waiver.

October 11, 2012: The Regional Water Board received the dairy's Water Quality Plan as required by the Waiver. Cow numbers at that time were 480 milking + dry, and 350 other cattle.

November 14, 2013: Regional Water Board received an Annual Report from Cunningham Dairy as required by the Waiver. The Annual Report indicates group membership with the Sonoma-Marín Representative Dairy Surface Water Monitoring program for surface water monitoring. Individual groundwater monitoring results for Nitrate and Fecal coliform were attached to the Annual Report.

II. Water Quality Monitoring

The Waiver Monitoring and Reporting Plan (MRP) requires rainy season sampling of surface water for Electrical Conductivity (EC), temperature, pH, and Ammonia. Surface water results are required to be submitted to the Regional Water Board each year. Group sampling is an option. The Fall 2013 Annual Report for Arrowhead Ranches indicates that the dairy is a member of the Sonoma-Marín Dairy Representative Monitoring Program for the 2012-2013 rainy season sampling. The Sonoma-Marín group results are reported to the Regional Water Board in an annual report.

According to the dairy representatives during the inspection, the well sampled was the domestic well as shown as "D" on the maps near Petaluma Hill Road north of the driveway.

Lab Form Well ID	Date Sample Collected	Nitrate as Nitrogen in mg/L	Fecal coliform in MPN
Ag Well	Fall 2012	Missing	Missing
Ag Well	2/1/13	19.0	2.0
Ag Well	Fall 2013	Missing	Missing

MPN means most probable number per 100 milliliters

III. Conclusion and Recommendations:

Soils and manure at Cunningham Dairy were observed to be stabilized, erosion control is practiced, and the dairy does not appear to pose a threat to surface waters or groundwater. The below-listed recommendations are offered to protect surface waters, groundwaters, and ensure compliance with the Waiver.

1. The dairy operator should work with local service providers such as the Natural Resources Conservation Service (NRCS) staff to upgrade the rain gutter system as discussed during the inspection. Proper treatment of stormwater runoff should be discussed with a technical service provider. Rain gutters should be installed on

production area buildings to prevent manure pond overflow and preserve storage capacity. Rain gutters that do not contact manure should drain to vegetated pastures.

2. A dairy Nutrient Management Plan (NMP) is recommended to be developed and implemented. NMPs are not required under the Waiver, however, NMPs demonstrate permit compliance such as Waiver prohibitions (page 11) and Waiver Attachment B: California Water Code Title 27. Regional Water Board recommends that all dairies work with a technical service provider to develop a NMP as discussed in the Waiver MRP and MRP Appendix 2.
3. Please note that the dairy Nitrate as Nitrogen results indicate that the groundwater sampled was above US EPA's Maximum Contaminant Level (MCL) of 10 mg/L. Values above 10 mg/L exceed the MCL and are indicative of nitrate contamination of the water supply. If nitrate results are higher than 10 mg/L, it is recommended that people use an alternative water source to mix infant formula. Contributions to the elevated nitrate results in the groundwater wells could be from the dairy, septic systems, improper handling of the sample, or neighboring properties due to a shared groundwater basin. Please ensure that the dairy practices protect or improve protection of groundwater quality by working with a technical service provider such as the NRCS.
4. The Waiver requires four Spring and Fall groundwater samples to be submitted. Please continue to collect Spring and Fall samples and submit results with your Fall Annual Reports. Also, please indicate on future lab forms, exactly which of the wells as shown on the Water Quality Plan maps, were sampled. Then results can be compared over time. The same wells should be sampled over time for comparison of results.
5. Please work with a technical service provider to ensure that nutrients do not enter the unnamed creek south of the Production Area. Gradual improvement projects such as the installation of cow exclusion fencing along the creek and the installation of water troughs away from the creek may be necessary in some areas in order to comply with Waiver prohibitions and the Water Quality Control Plan for the North Coast Basin. The prohibitions are listed on Waiver page 11 and prohibit the discharge of waste, such as nutrients and sediment, to surface water.
6. Extensive bare soil areas were observed throughout the dairy Production Area. Also, manure was being stored on soil. Please work with a technical service provider to discuss possible improvements in manure management measures for the protection of surface and groundwater quality.

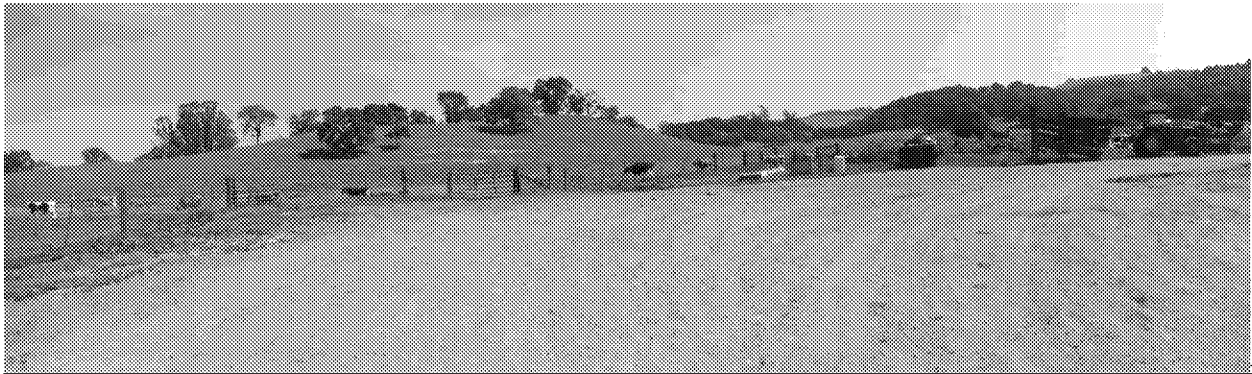
Enclosures- Dairy (2), Location, and Topographic Maps

cc: Melissa Lema, Western United Dairymen [[HYPERLINK "mailto:wud.mlema@yahoo.com"](mailto:wud.mlema@yahoo.com)]

Photo Log - April 15, 2014 by Cherie Blatt



1. Cunningham Dairy Sign



2. Corral Area Overview



3. Corral Area



3. Corral Area



4. Dairy Lane



5. Feed Storage and Animal Housing



6. Feed and Fuel Storage



7. Manure Storage



8. Animal Housing and Feed Storage



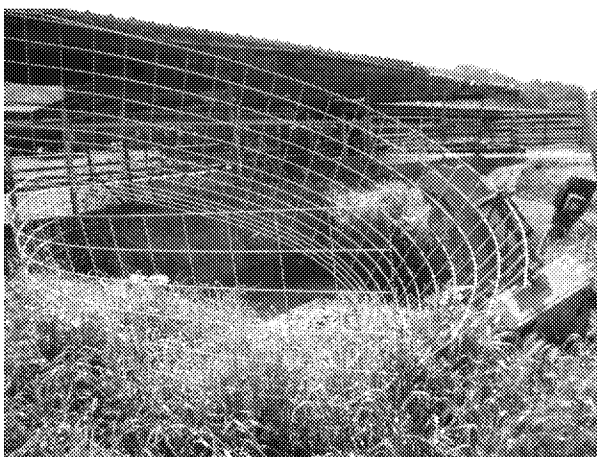
9. Animal Housing



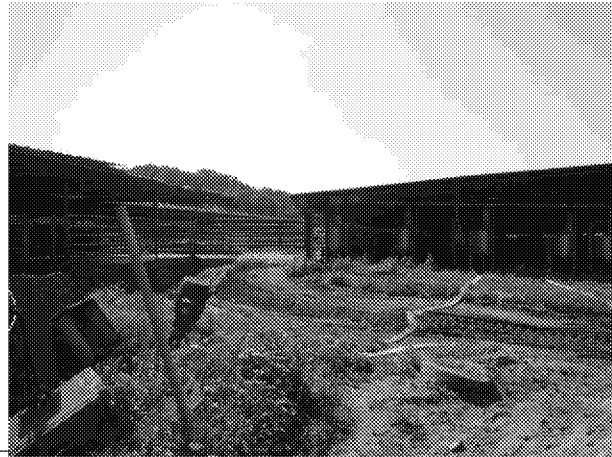
10. Animal Housing. Note dysfunctional rain gutters



11. Manure Pit



12. Manure Pit



13. Animal Housing



14.Dairy Lane



15. Corral Area



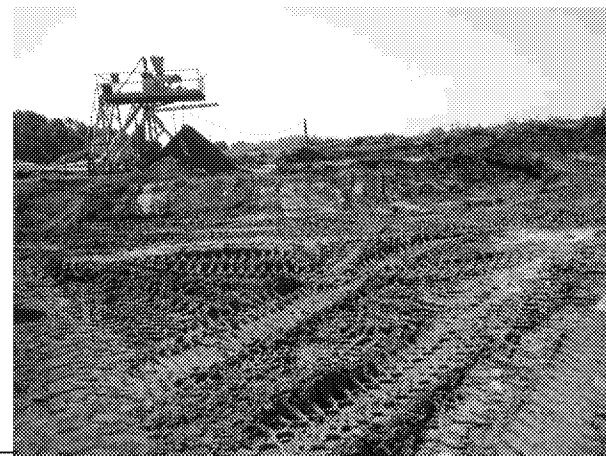
16.Animal Housing



17. Calf Pens



16.Manure Separator



17. Manure Separator area



18. Concrete lined Manure Pond



19. Manure Pond



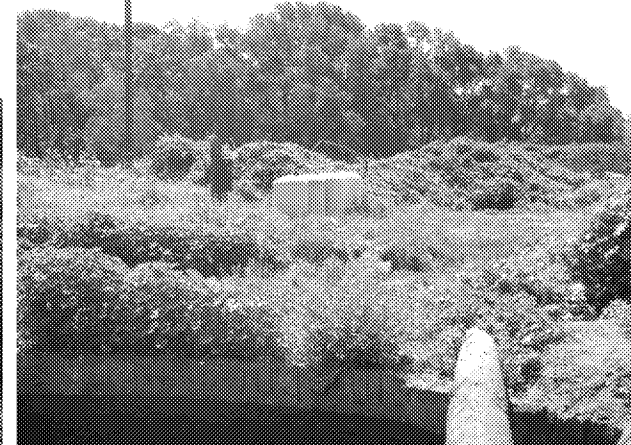
20. Manure Separator



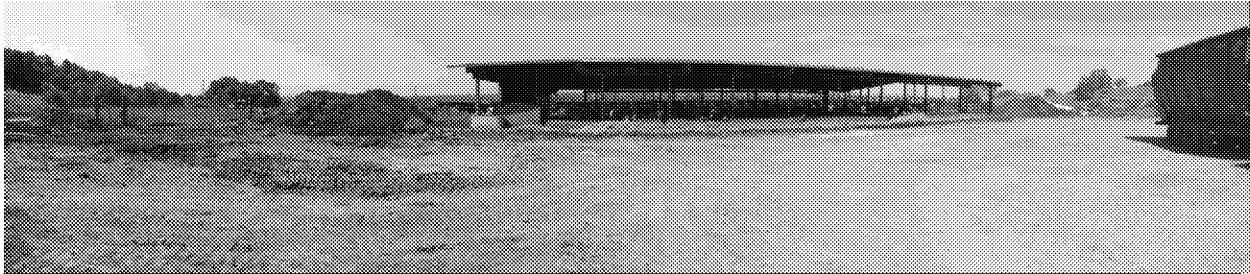
21. Manure Separator lines



22. Animal Housing with Concrete Sluice



23. Agricultural Well South of Manure Pond



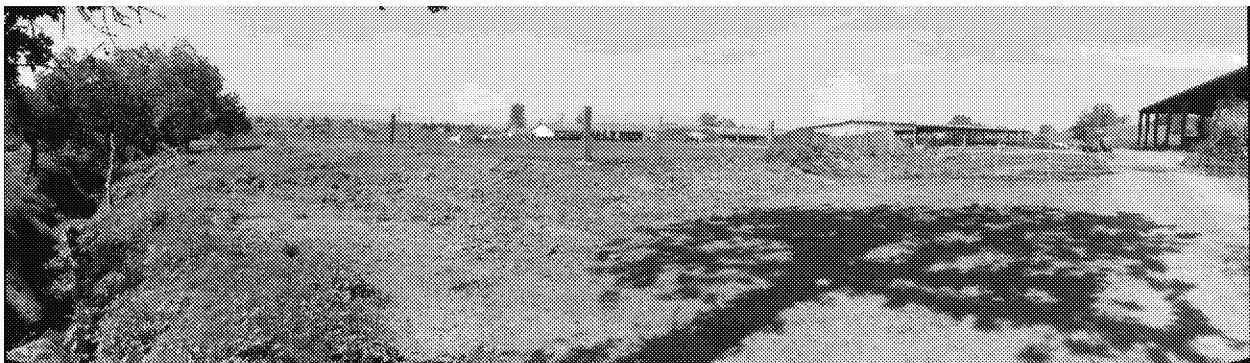
24. Corral and Animal Housing



25. Downstream view of Unnamed Creek at Truck Crossing



26. Upstream view of Unnamed Creek at Truck Crossing



27. Corral (right) in Proximity of Unnamed Creek (left)



28. Downstream of Trail Crossing



29. Downstream of Trail Crossing



30. Downstream of Trail Crossing, note riparian vegetation on Unnamed Creek